

H1576
0056270

23 November 2001

Joan Kessner
Bechtel-Hanford, Inc.
3190 Washington Way
MSIN H9-03
Richland, WA 99352

Subject: Contract No. 630
Analytical Data Package

Dear Ms. Kessner:

Enclosed are the hard copy analytical reports for the batch number/fraction indicated (marked X) in the following table:

LvLI Batch #	0111L258
SDG #	H1569/H1576
SAF #	B02-007
Date Received	11-2-01
# Samples	2
Matrix	Water
Volatiles	X
Semivolatiles	X
Pest/PCB	
DRO/GRO	
GC Scan	X
Metals	X
Inorganics	X

The electronic data deliverable (EDD) will be emailed shortly. If you have any questions, please don't hesitate to contact me at (610) 280-3012.

Sincerely,
Lionville Laboratory Incorporated


Orlette S. Johnson
Project Manager

RECEIVED
JAN 24 2002
EDMC



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A1570

Lionville Laboratory, Inc.
VOA ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B02-007

DATE RECEIVED: 11/02/01

LVL LOT # :0111L258

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B13C83	001	W	01LVX487	10/29/01	N/A	11/08/01
B13CT0	002	W	01LVX487	10/31/01	N/A	11/08/01
B13CT0	002 MS	W	01LVX487	10/31/01	N/A	11/08/01
B13CT0	002 MSD	W	01LVX487	10/31/01	N/A	11/08/01

LAB QC:

VBLKJS	MB1	W	01LVX487	N/A	N/A	11/08/01
VBLKJS	MB1 BS	W	01LVX487	N/A	N/A	11/08/01





Client: TNU-HANFORD B02-007
LVL #: 0111L258
SDG/SAF #: H1569, H1576/B02-007

W.O. #: 11343-606-001-9999-00
Date Received: 11-02-2001

GC/MS VOLATILE

Two (2) water samples were collected on 10-29,31-2001.

The samples and their associated QC samples were analyzed according to criteria set forth in Lionville Laboratory OPs based on SW 846 Method 8260B for TCL Volatile target compounds on 11-08-2001.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. The cooler temperature upon receipt has been recorded on the chain-of-custody.
2. Samples were analyzed within required holding time.
3. Non-target compounds were not detected in the samples.
4. All surrogate recoveries were within EPA QC limits.
5. All matrix spike recoveries were within EPA QC limits.
6. All blank spike recoveries were within EPA QC limits.
7. The method blanks contained the common laboratory contaminant Methylene Chloride at a level less than 2x the CRQL.
8. Internal standard area and retention time criteria were met.
9. A spectral search was performed for Decane; however, it was not detected in the samples.
10. "I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."



J. Michael Taylor
President

Lionville Laboratory Incorporated

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The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 10 pages.

11/23/01
Date

GLOSSARY OF VOA DATA

ABBREVIATIONS

BS	-	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported.
BSD	-	Indicates blank spike duplicate.
MS	-	Indicates matrix spike.
MSD	-	Indicates matrix spike duplicate.
DL	-	Suffix added to sample number to indicate that results are from a diluted analysis.
NA	-	Not Applicable.
DF	-	Dilution Factor.
NR	-	Not Required.
SP, Z	-	Indicates Spiked Compound.

GLOSSARY OF VOA DATA

DATA QUALIFIERS

- U** = Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.
- J** = Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
- B** = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.
- E** = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
- D** = Identifies all compounds identified in an analysis at a secondary dilution factor.
- I** = Interference.
- NQ** = Result qualitatively confirmed but not able to quantify.
- N** = Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.
- X** = This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).
- Y** = Additional qualifiers used as required are explained in the case narrative.

TECHNICAL FLAGS FOR MANUAL INTEGRATION

Manual quan modifications or integrations are performed routinely to improve the data quality for a variety of technical reasons. Documentation of these modifications should be clear and concise. The following "flags" are used to indicate the technical reasons for quan modifications:

- MP** - Missed Peak: manually added peak not found by automatic quan program.
- PA** - Peak Assignment: quan report was changed to reflect correct peak assignment.
- RI** - Routine Integration: routine integrations are performed for some analytes that are consistently integrated improperly by the automatic integration programs. Examples are the dichlorobenzene isomers on the VOA packed column and benzo(b)fluoranthene/benzo(k)fluoranthene which are poorly resolved on the BNA column.
- SP** - Split Peak: the automatic integration improperly split the peak; a manual integration was performed to get the correct area.
- CB** - Coelution/Background: peak was manually integrated to eliminate contribution from coeluting compounds, background signal, or other interference.
- PI** - Proper Integration: a peak with poor or inconsistent integration (e.g., excessive tail) was properly integrated manually.

Lionville Laboratory, Inc.

Volatiles by GC/MS, HSL List

Report Date: 11/12/01 12:23

RFW Batch Number: 0111L258

Client: TNU-HANFORD B02-007

Work Order: 11343606001 Page: 1a

Cust ID:		B13C83	B13CT0	B13CT0	B13CT0	VBLKJS	VBLKJS BS
Sample		001	002	002 MS	002 MSD	01LVX487-MB1	01LVX487-MB1
Information		Matrix:	WATER	WATER	WATER	WATER	WATER
		D.F.:	1.00	1.00	1.00	1.00	1.00
		Units:	ug/L	ug/L	ug/L	ug/L	ug/L
Toluene-d8		100	%	100	%	101	%
Surrogate Bromofluorobenzene		90	%	94	%	96	%
Recovery 1,2-Dichloroethane-d4		97	%	95	%	92	%
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====							
Chloromethane		10	U	10	U	10	U
Bromomethane		10	U	10	U	10	U
Vinyl Chloride		10	U	10	U	10	U
Chloroethane		10	U	10	U	10	U
Methylene Chloride		6	B	7	B	8	B
Acetone		10	U	10	U	10	U
Carbon Disulfide		5	U	5	U	5	U
1,1-Dichloroethene		5	U	5	U	85	%
1,1-Dichloroethane		5	U	5	U	84	%
1,2-Dichloroethene (total)		5	U	5	U	5	U
Chloroform		5	U	5	U	5	U
1,2-Dichloroethane		5	U	5	U	5	U
2-Butanone		10	U	10	U	10	U
1,1,1-Trichloroethane		5	U	5	U	10	U
Carbon Tetrachloride		5	U	5	U	5	U
Bromodichloromethane		5	U	5	U	5	U
1,2-Dichloropropane		5	U	5	U	5	U
cis-1,3-Dichloropropene		5	U	5	U	5	U
Trichloroethene		5	U	5	U	5	U
Dibromochloromethane		5	U	5	U	101	%
1,1,2-Trichloroethane		5	U	5	U	101	%
Benzene		5	U	5	U	2	J
Trans-1,3-Dichloropropene		5	U	5	U	95	%
Bromoform		5	U	5	U	5	U
4-Methyl-2-pentanone		10	U	10	U	5	U
2-Hexanone		10	U	10	U	5	U
Tetrachloroethene		5	U	5	U	10	U
1,1,2,2-Tetrachloroethane		5	U	5	U	10	U
Toluene		5	U	5	U	5	U

* = Outside of EPA CLP QC limits.

RfW Batch Number: 0111L258

Client: TNU-HANFORD B02-007

Work Order: 11343606001 Page: 1b

Cust ID:

B13C83

B13CT0

B13CT0

B13CT0

VBLKJS

VBLKJS BS

RfW#:

001

002

002 MS

002 MSD

01LVX487-MB1

01LVX487-MB1

Chlorobenzene	5 U	5 U	99 %	100 %	5 U	93 %
Ethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U	5 U
Xylene (total)	5 U	5 U	5 U	5 U	5 U	5 U

*= Outside of EPA CLP QC limits.

Lionville Laboratory Use Only

04/12/258

Custody Transfer Record/Lab Work Request Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS



Client TNU HANFORD B02-007

Est. Final Proj. Sampling Date _____

Project # 11343-606-001-9999-00

Project Contact/Phone # _____

Lionville Laboratory Project Manager OT

QC SPEC Del STD TAT 15 day

Date Rec'd 11-2-01 Date Due 11-17-01

Refrigerator # 1 2

#/Type Container

Volume

Preservatives

ANALYSES REQUESTED →

ORGANIC: VOA, BNA, Pest/PCB, Herb

INORG: Metal, CN

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only									
			MS	MSD				0624X	0625X								
S - Soil																	
SE - Sediment																	
SO - Solid																	
SL - Sludge																	
W - Water																	
O - Oil																	
A - Air																	
DS - Drum Solids																	
DL - Drum Liquids																	
L - EP/TCLP Leachate																	
WI - Wipe																	
X - Other																	
F - Fish																	
	001	B13C83			W	10-27-01	0640	1									
	002	B13C70			L	03-01	1500	3	2								

Special Instructions:

DATE/REVISIONS:

- MC10 1. As, Ba, Cd, Cr, Pb, Se, Ag, Be, Cu, Ni, V, Zn
- IC 0 2. IEC, IECFL, ICNO3, ICNO2, ICPO4, ICSO4
- 11-5-01 3. Cancel 0624X Add 0624H + 06CSC
4. _____
5. _____
6. _____

Relinquished by	Received by	Date	Time
Fed Ep	Handy	11/2/01	0935

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL		
	REWRITTEN		

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES: 4235 7954 8545

Lionville Laboratory Use Only

Samples were: 1) Shipped ☒ or Hand Delivered ☒

2) Ambient or Chilled ☒

3) Received in Good Condition ☒ or N

4) Samples Properly Preserved ☒ or N

5) Received Within Holding Times ☒ or N

Temper Resistant Seal was: 1) Present on Outer Package ☒ or N

2) Unbroken on Outer Package ☒ or N

3) Present on Sample ☒ or N

4) Unbroken on Sample ☒ or N

COC Record Present Upon Sample Rec'd ☒ or N

Cooler Temp. 4 °C

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						B02-007-02	Page 1 of 1		
Collector Thomas, G/Watson, D		Company Contact Conlock, CS		Telephone No. 372-9638		Project Coordinator TRENT, SJ		Price Code <input checked="" type="checkbox"/>	Date Turnaround 45 Days		
Project Designation 200 Area Source Characterization 200-CS-1 OU - QC Sampling		Sampling Location 200 East & West		SAF No. B02-007		Air Quality <input type="checkbox"/>		15 Day			
Ice Chest No. See DSPC		Field Logbook No. EL-1551		COA XL2002CHGR		Method of Shipment Fed Ex					
Shipped To PSR REPT		Office Property No. A020018		Bill of Lading/Air Bill No. See DSPC							
POSSIBLE SAMPLE HAZARDS/REMARKS Samples did not originate in radiological controlled area. No total activity associated with sample/samples. Special handling and/or storage				PRESERVATION	HCl or H2SO4 to pH < 2 Coo						
				Type of Container	sGs*						
				No. of Container(s)	1						
				Volume	40mL						
				SAMPLE ANALYSIS				VQA - 226Ra (TCL); VOA - 226Ra (Add-On) (I-Propanol, Ethanol)			
Sample No.	Matrix *	Sample Date	Sample Time								
B13C83	WATER	10/29/01	2640	X							
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS							
Relinquished By/Removed From DIS WATSON/GW		Date/Time 10-30-01 0215		Received By/Stored In REF-1A 3728 RDG		Date/Time 10/30/01 1215		Matrix *			
Relinquished By/Removed From Ref 1A 3728		Date/Time 11-1-01 0900		Received By/Stored In R. T. Moore		Date/Time 11-1-01 0900		g-Ball			
Relinquished By/Removed From R. T. Moore		Date/Time 11-1-01 0900		Received By/Stored In F. E. O'Neil		Date/Time 11-1-01 0900		SD-Glassware			
Relinquished By/Removed From F. E. O'Neil		Date/Time 11/2/01 0935		Received By/Stored In V. Hernandez		Date/Time 11-2-01 0935		SD-Solid			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		W-Water			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		O-Oil			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		A-Air			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		DS-Drum Solids			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		TL-Drum Liquids			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		T-Tissue			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		WS-Wipe			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		L-Liquid			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		V-Vegetation			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		X-Other			
LABORATORY SECTION		Received By		Title		Date/Time					
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time					

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						B02-007-03		Page 1 of 1					
Collector Watson, D/Bowers DL		Company Contact Coarlock, CS		Telephone No. 372-9638		Project Coordinator TRENT, SJ		Price Code 7N		Data Turnaround 45 Days					
Project Designation 200 Area Source Characterization 200-CS-1 OU - QC Sample		Sampling Location 200 East & West		SAF No. B02-007				Air Quality <input type="checkbox"/>							
Ice Chest No. SEE OSPC		Field Logbook No. EL1551		COA B20CS1673C		Method of Shipment Fed Ex									
Shipped To TMA/RECRA		Offsite Property No. AD20018		Bill of Lading/Air Bill No. SEE OSPC											
POSSIBLE SAMPLE HAZARDS/REMARKS Samples did not originate in radiological controlled area. No total activity associated with sample/samples. Special Handling and/or Storage ET 11-1-01				Preservation	HCl or H2SO4 to pH < 2 Cool	Cool 4C	HNO3 to pH < 2	H2SO4 to pH < 2 Cool 4C	Cool 4C	ZnAs+NaOH to pH > 9 Cool	HNO3 to pH < 2	HCl or H2SO4 to pH < 2 Cool			
				Type of Container	aGs*	aG	aG	aG	aG	aG	aG	aG	aG	aG	
				No. of Containers(s)	3	2	1	1	1	1	2				
				Volume	40mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	40mL			
SAMPLE ANALYSIS				VOA - #260A (TCL); VOA - #260A (Add-On) (l-Propanol, Ethanol)	Semi-VOA - #270A (Add-On) (Triethyl phosphate)	See item (1) in Special Instructions.	NO2/NO3 - 353.1; Ammonia - 350.3	See item (2) in Special Instructions.	Sulfides - 9630	Gross Alpha; Gross Beta	VOA - #260A (TCL); VOA - #260A (Add-On) (l-Propanol, Ethanol)				
Sample No.	Matrix *	Sample Date	Sample Time												
B13CTO	WATER	10-31-01	1500	X	X	X	X	X	X						
B13GT1	WATER	10-31-01													
CHAIN OF POSSESSION				SIGNATURE NAMES						SPECIAL INSTRUCTIONS					
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time		** Laboratory is to measure pH within 24 hours of sample receipt. ** The ERC acknowledges the 48-hour holding time will not be met for Nitrate using EPA method 300.0. ** The laboratory is to report Decane as a TIC if present in detectable quantities. (1) ICP Metals - 6010A (Supertrace) (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); ICP Metals - 6010A (Supertrace Add-On) (Beryllium, Copper, Nickel, Vanadium, Zinc) (2) IC Anions - 300.0 (Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate); pH (Water) - 9040 Samples stored in Ref. 2A at the 3728 Shipping Facility on 10/31/01. Collector not available to relinquish samples on 11/1/01 for shipment. ET 11-1-01								
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time										
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time										
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time										
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time										
LABORATORY SECTION		Received By	Title		Date/Time										
FINAL SAMPLE DISPOSITION		Disposal Method	Disposed By		Date/Time										